Foulke, Emerson.

WHITE CANE STILL BEST MOBILITY
AID.

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the blind by favoring members of the National Federation of the Blind?

4. Because the committee was denied a list of Iowa NFB members by the Iowa Chapter of the NFB, the committee was unable to determine if NFB members got a disproportionate amount of services.

5. There is no evidence available to the commitee indicating financial records have been maintained to identify the nature and extent of that relationship. Given the fact that no direct transactions involving payment of state funds to those organizations have occurred, at least during the period investigated, the ad hoc committee has been unable to discover any evidence to show that the public's trust has been breached.

6. Because no federal audit of Commission financial practices has occurred in 13 years to provide a needed revised basis for state audit of federal funds and, in recognition of the change in Commission directors, the committee recommends a federal audit be requested.

WHITE CANE STILL BEST MOBILITY AID , by Emerson Foulke

Despite all the sophisticated electronic mobility devices produced for the blind, the simple cane is still the best mobility aid. This, in essence, was the opinion of Emerson Foulke, Director of the Perceptual Alternatives Laboratory of the School of Psychology, University of Louisville, expressed during the conference of the Midwest Regional division of the American Association of Workers for the Blind, held in Chicago last July.

"Most of our research effort has been directed to acquiring a better understanding of the perceptual basis for mobility. Then, we would have information to help know what mobility aids or devices to build. A problem with existing mobility aids is, although we have a very advanced state of electronics technology (engineers can

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design practically anything they wish), we really don't know what mobility aid to build—what information it should gather, how it should display that information—through what sensory channel.

"If you examine the experience people have had with mobility devices, you conclude, although they have been helpful to some degree, they have not solved mobility problems for blind pedestrians. Although much effort and money has been put into construction of sophisticated electronic mobility aids, the long cane is still the best mobility device we know.

"Toward the end of the second World War, Hoover developed the long cane technique. Previously, canes used by blind persons were designed for the lame. They were too short and had large crooks on the ends of their handles. They were intended for support. The blind person's cane needs to be a tool for gathering information about the space in front of him. A cane used for this purpose ought to have different characteristics from one intended for use by lame persons. Hoover reasoned, if the cane were used to contact obstacles in the path before the human operator, it needed to be long enough to explore space before a person's footfall landed there. Therefore, he lengthened it. A cane of that sort should be lighter in order not to fatigue the user with a large, heavy instrument. This was a significant improvement. Another is the folding cane. There are a number on the market. Some are not as effective as they might be, but there are some very good ones. In many situations, it is inconvenient to manage a cane that can't be folded and stowed when it is not needed. In our laboratory, we tried bringing about further improvements. Cane users get information about surfaces on which they walk from their cane tips. Conventional cane tips catch on discontinuities or irregularities in those surfaces. When this occurs, the cane is temporarily disfunctional. Rough brick walks, grassy surfaces, or metal gratings are problematic for cane users. Solution of this problem had to be inexpensive to be generally useful. We extended the cane tip and bent it into an

elbow. This elbow contacts the surface. Ahead of it is a length of nylon rod extending upward from the surface at an angle. This enables the tip to pass easily over discontinuities. The tip we devised is not perfect. It catches on some irregularities, but it does a much better job of exploring surfaces than the conventional one. We also redesigned the cane handle. Since the cane is a tool for gathering information from the environment, the handle ought to allow the user to manipulate it with precision. He should also be able to use the cane over a long period of time without experiencing fatigue. These requirements are taken seriously by designers of industrial tools. A poorly designed grip is likely to cause an accident, which can be costly to the company employing the user of the inadequate tool. The cane user deserves a good grip, too. After trying different things—bending plastic in various shapes—we finally hit upon the simple hatchet handle. We cut it to the appropriate length and fit it on a cane. It fit into the hand nicely. Its shape allowed the hand to droop, making contact with the surface, while the operator's wrist was not bent. We avoided some muscle fatigue ordinarily experienced when holding the hand at an uncomfortable angle. This handle can be put on a folding cane or a straight aluminum tube. As we suspected, our research shows it is possible to use this cane with somewhat greater precision and over a longer period of time without experiencing fatigue than the conventional cane. Once we complete this research, we will report it in some appropriate place. Then, we would like to arrange to make this cane more widely available. We operate in a university environment. The laboratory is a research laboratory. We are not in a position to deliver services or engage in development or dissemination of products. When we have findings that may be worthwhile, we usually must discover some way to get somebody else to implement them.

"The laser cane, made by Bionic Instruments, developed with funds from grants awarded by the Veterans Administration, may be

an answer to some mobility problems. Properly used, it provides information about obstacles in the path ahead as well as overhead obstacles. We'll have to find enough people who are well trained in the use of this cane and evaluate their performance in order to know to what extent it will constitute an answer to the mobility problem. Radar glasses, worn in conjunction with the conventional cane, are used with earplugs. These are designed to be transparent as much as possible. They allow other sounds to enter the ear canals. It is possible to listen to automobile traffic and other sounds in the environment simultaneously with sounds of the mobility aid itself. Some people complain that, even though they can hear other sounds in the environment, they find the mobility aid is distracting at times when they would like to listen to the traffic flow. Leslie Kay, and the people who participated in developing this device, say a person with adequate training is not bothered by this distraction. I could safely say it is difficult for a blind pedestrian to learn to interpret the signals provided by these devices. They don't give him all the information he needs. Frequently, they don't give it to him with enough advance warning so he can respond appropriately at the right time.

"The dog guide is also an excellent mobility aid. Many factors must be considered in choosing the most suitable mobility aid for a particular individual. Some people like dogs and can manage them effectively. Others are not fond of them and do not know how to maintain their training properly. In many situations, a dog is convenient; in others, it is not.

"Some people are highly motivated to travel. Some are more willing to accept the risks involved in traveling independently. People vary considerably in ability to assess and willingness to accept risks. Most blind pedestrians, when traveling independently, particularly in unfamiliar areas are, to some degree, apprehensive. We have data indicating heart rates of blind pedestrians traveling over unfamiliar routes are higher than those of sighted pedestrians

traveling over the same ones. This increase of heart rate is probably the result of stress experienced while carrying out the task. No matter how good you are as a blind pedestrian, there is still likely to be some residual stress, making traveling independently a little less comfortable than for the sighted pedestrian."

KALEIDOSCOPING THE NEWS

Washington, D.C. John Maxson, former staff member at the New Mexico School for the Blind in Alamogordo, has been named executive director of the American Association of Workers for the Blind. He has experience in both rehabilitation and education.

Salt Lake City, Utah. At a luncheon, held during their annual convention, Randolph-Sheppard Vendors of America presented their Annual Service Award to Don Cameron of Tampa, FLorida, for outstanding work done with and for vendors around the country.

Washington, D.C. At the opening session of the annual conference of the President's Committee on Employment of the Handicapped, James S. Jeffers, director of Illinois Division of Vocational Rehabilitation, received the President's trophy as Handicapped American of the Year—the highest award presented to a handicapped American.

Chicago, Illinois. At the annual convention of the American Library Association held in Chicago, last June, the Francis Joseph Campbell Award was presented to Dr. Richard Kinney, president of Hadley Correspondence School in Winnetka, Illinois.

McLEAN AND SNYDER HEAD LEADERSHIP LEAGUE

Election of a new set of officers, and appointment for the first time of an executive director, was seen as an indication that the Affiliated Leadership League (ALL) was removing itself from its close affiliation with the American Council of the Blind in which it has been operating since its inception two years ago. Elected to replace

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